

Article

How Political Repression Stifled the Nascent Foundations of Heredity Research before Mendel in Central European Sheep Breeding Societies

Péter Poczai ^{1,2,3,*} , Jorge A. Santiago-Blay ⁴ , Jiří Sekerák ⁵ and Attila T. Szabó ⁶¹ Botany Unit, Finnish Museum of Natural History, University of Helsinki, FI-00014 Helsinki, Finland² Institute of Advanced Studies Kőszeg (iASK), 9731 Kőszeg, Hungary³ Department of Molecular Plant Physiology, Institute for Water and Wetland Research, Radboud University, 6500 GL Nijmegen, The Netherlands⁴ Department of Paleobiology, National Museum of Natural History, Washington, DC 20560, USA; blayjorge@gmail.com⁵ Department of the History of Biological Science, Mendelinaum, The Moravian Museum, 659 37 Brno, Czech Republic; jsekerak@mzm.cz⁶ BioDatLab, 8230 Balatonfüred, Hungary; biodatlab.balatonfured@gmail.com

* Correspondence: peter.poczai@helsinki.fi

Abstract: The nineteenth century was a time of great economic, social, and political change. The population of a modernizing Europe began demanding more freedom, which in turn propelled the ongoing discussion on the philosophy of nature. This spurred on Central European sheep breeders to debate the deepest secrets of nature: the transmission of traits from one generation to another. Scholarly questions of heredity were profoundly entwined with philosophy and politics when particular awareness of “the genetic laws of nature” claimed natural equality. The realization that the same rules of inheritance may apply to all living beings frightened both the absolutist political power and the divided society of the day. Many were not prepared to separate religious questions from novel natural phenomena. Open-minded breeders put their knowledge into practice right away to create sheep with better wool traits through inbreeding and artificial selection. This was viewed, however, as the artificial modification of nature operating against the cultural and religious norms of the day. Liberal attempts caught the attention of the secret police and, consequently, the aspirations of scholars were suppressed by political will during approximately 1820–1850.

Keywords: artificial selection; history of heredity; learned societies; sheep breeding; war



Citation: Poczai, P.; Santiago-Blay, J.A.; Sekerák, J.; Szabó, A.T. How Political Repression Stifled the Nascent Foundations of Heredity Research before Mendel in Central European Sheep Breeding Societies. *Philosophies* **2021**, *6*, 41. <https://doi.org/10.3390/philosophies6020041>

Received: 20 March 2021

Accepted: 12 May 2021

Published: 19 May 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Science, stemming from the Latin word “*scientia*” for “knowledge”, usually refers to the great enterprise of observing, identifying, describing and explaining phenomena through experimental investigation [1] (p. 49–71). This characterizes science as an outlook based on empirical knowledge that is derived from sensory experiences, particularly by observation and experimentation [2] (p. 129–138). To quote Carl Sagan along these lines: “*Science is more than a body of knowledge. It is a way of thinking; a way of skeptically interrogating the universe with a fine understanding of human fallibility. If we are not able to ask skeptical questions, to interrogate those who tell us that something is true, to be skeptical of those in authority, then, we are up for grabs for the next charlatan (political or religious) who comes rambling along*” [3] (p. 143).

Experimentation is often incompatible with the surrounding social environment [4]. For present-day historians of science, the fact that scientists and their work are intimately intertwined with political forces is neither scandalous nor surprising [5]. After all, the entire scientific endeavor cannot happen without society’s blessing. Science is not an isolated cultural activity but actively shapes politics and society, as well as actively being

shaped by them [6]. Norms and values inform research and scientists are themselves acknowledged as human beings too, which constitutes the legacy of decades of research in the history, philosophy, anthropology, and sociology of science [6–8]. Even something as seemingly innocuous as secondary science education teaches students not only facts, but also about what sorts of facts are worth knowing [9] (p. 135). Furthermore, it teaches which scientists we should remember and with what sentiments we should remember them. This is especially true for genetics, which has a crooked history with forgotten or overlooked scholars. However, important changes are taking place in how undergraduate genetics courses are taught largely in response to recent developments [10].

Stetten [11] also pointed to the effect of assaults upon the freedom of enquiry and the pursuit of knowledge, which have been the stock trade of all but most benign dictatorships. The best example as to how politics can corrupt and undermine the rational bases of science can be seen through Lysenkoism [12–15]. Under Stalin’s rule, genuine Mendelian genetics was banned, and a soviet pseudoscientific discipline was favored, which had devastating consequences, leading to the death of millions in the Communist Bloc [16,17]. Lysenko’s signal achievement had been to persuade Joseph Stalin (1878–1953), and after him also Nikita Khrushchev (1894–1971), that the heredity of acquired characteristics [18] offered proof of the Marxist concept of societal evolution [19,20]. Indeed, one of the authors of this paper stands as witness to the experiences from that Stalinist era. Unfortunately, genetics was born in Central Europe and important historical research on its development was hindered, including learning about Mendel’s personality and the background of his experiments. Progress was frustrated first by the Nazi occupation [21–23] and later by the communist revolution [24]. In this regard, we should not forget about H. J. Muller (1890–1967) who spoke out on numerous occasions about the uses and abuses of genetics in society [25].

Behind the Iron Curtain, Vítězslav Orel (1926–2015) made a strong contribution to the rehabilitation of genetics, generally, by championing the work of Johann Gregor Mendel (1822–1884). His work was beset by the wider problems associated with Mendel’s recognition in the Communist Bloc, and by the way in which narratives of the history of science were co-opted into the service of Cold War and post-Cold War political agendas [26]. Together with Jaroslav Kříženecký (1896–1964), in 1962 he cofounded the Mendelianum in Brno (Czech Republic), which for decades has served as an intellectual bridge between the East and West. Orel’s involvement with this institution exposed him to dangers both during and after the Cold War [26]. Kříženecký was imprisoned by the Gestapo twice and once by the communists for promoting Mendelian genetics, while Orel was termed as an “individualist” and was forced to work at a poultry farm due to his connections to Kříženecký. The Iron Curtain is long gone, but puzzling together the early history of heredity research is still actively ongoing today (see [27] (p. 85)), revealing that the malevolent shadow of repressive politics has already surrounded the cradle of pre-Mendelian corpuscular genetics—a time when animal and plant breeders of the Habsburg Empire debated among themselves over the effect of artificial selection (*künstliche Zuchtwahl*) on any organism manifested in inherent changes among generation guided by the “genetic force (*genetische Kraft*)” [28] (p. 181–183); [29]. The term “artificial selection” coined by Christian Carl André (hereafter C.C. André) in 1812 is reminiscent of the expression “natural selection” introduced much later by Charles Darwin (1809–1882). The connection between Darwin and sheep breeders was investigated by Wood [30].

2. Creative Philanthropy: Setting the Stage for Industrial and Scientific Revolution

The origin and development of scientific sheep breeding in Moravia and the promotion of natural sciences in Brno (Brno) through private learned societies can be traced back to Christian Carl André (1763–1831) (Figure 1). André was a prominent figure in Moravia, exhibiting a keen perception of and support for elements of early liberalism [31] (p. 617–631). André was born and raised in Hildburghausen, Thuringia. He studied at the University of Jena and in 1782, he established an educational institution in Arolsen where

he worked as a teacher. In 1785 he was invited to teach in the prestigious Schnepfenthal Institution (*Salzmannschule Schnepfenthal*) in the district of Gotha (Germany)—an institute founded in 1784 by the educational reformer Christian Gotthilf Salzmann (1744–1811). Salzmann and André advocated philanthropic pedagogy or *Philanthropismus* and founded girls' schools that encouraged students to be open-minded and to acquire knowledge by directly observing nature. As part of the curriculum students were thought to exercise their minds and their body equally. Schnepfenthal was the first institution to incorporate natural sciences into the general education curriculum. André was well versed in different scientific disciplines, including botany, zoology, and economics [32] (p. 47–56). He showed a particular interest in mineralogy and became a follower of “the father of German geology,” Abraham Gottlob Werner (1749–1817). In 1798, André received an invitation from Victor Heinrich Riecke (1759–1830) to become a teacher in Brno, and he brought with him his extensive natural science collections, including a large cabinet of mineralogical collections [33] (p. 31). He took part in the organization and foundation of several private learned societies with Riecke and other prominent figures. These figures included, Ignaz Mehoffer (1747–1807), Count Johann Nepomuk Mittrovský (1757–1799), and Heindrich Friedrich Hopf (1754–1825), who were also dedicated to the scientific and intellectual developments in Brno. Moving from Saxony to Brno, André met the broadly educated Count Hugo Franz Salm-Reifferscheidt (1776–1836) (Figure 2), Moravia's leading industrialist.



Figure 1. Portrait of the agricultural expert and journalist Christian Carl André in 1819, engraving by Blasius Höfel after Ant. Richter. Printed from a negative in the archive of the Mendelianum in Brno.



Figure 2. Portrait of the philanthropic count Hugo Salm leading figure of the agricultural and industrial revolution in Brno. Courtesy of the National Heritage Institute, Czech Republic catalogue number: RA8367.

Salm had a fine private library of 59,000 volumes, rich in works on natural science and technical subjects, but also on art history, the occult, alchemy, and freemasonry, all housed in his castle in Rájec-Jestřebí (Raitz-Jestreb) not far from Brno. Among other things, he introduced a smallpox vaccine in Austria and Moravia [34] (p. 233–235), based on the methods of enlightened empiricism of the early 19th century (see [35]). Salm also conducted chemical experiments in his castle's laboratory, dabbled in the field of metallurgy, and launched expeditions to the Macocha Abyss in the Moravian Karst [36] (p. 6). In 1798, he went to Berlin to study the latest methods for distilling sugar from beetroots, then worked as a miner in Příbram, Bohemia (nowadays the Czech Republic). Determined to raise the level of local wool production, Salm—disguised as a laborer—worked in several English factories, where he stole the designs of modern textile machines and then smuggled them into Moravia [34] (p. 233–235); [37] (p. 191).

As part of the Habsburg Empire, Brno gradually emerged as the 'Austrian Manchester' and Salm became a wealthy benefactor of natural sciences. He needed an economic advisor, a role in which André successfully served. Moreover, serving in this role had provided André with enough of a salary to pursue his own ambitious scientific visions. As a leading center for wool production, Brno became involved in the need of fine wool and increased demand for agricultural products due to the outbreak of the Napoleonic Wars (1803–1815). The Habsburg Empire partook in all alliances organized against the French Revolution and Napoleon Bonaparte (1769–1821). Its aristocracy voted for new taxes and the army recruited millions of soldiers, with tens of thousands dying in European battlefields. With the surge in prices for grain and wool, producers and merchants benefitted. With scarce resources to finance its increasing expenditures, the monarchy supported activities aimed at producing larger volumes of wool and cereals at lower prices.

Interest in knowledge about the improvement of fine wool grew among the members of private learned societies in Brno, mainly composed of factory owners, aristocratic improvers, intellectuals, animal breeders, and natural scientists. Working together, they

were interested in producing large quantities of fine wool in a short time. This started with the establishment of the ‘Royal and Imperial Moravia-Silesian Association for the Furtherance of Agriculture, Natural Science and Knowledge of the Country’ Moravian Agricultural Society (MAS)’ generally known as *Ackerbaugesellschaft* in 1806. André said the following at the opening:

“We are simultaneously establishing an academy of science and an economic society. We wish to arrange our experiments methodically, and not only according to sense and experience; we wish to carry out research, examination, instruction, and improvement on the basis of the clarified principles of the cost-effective subsidiary science. Without science it is impossible to achieve any progress [. . .] it may take centuries for works to emerge from our circle that are capable of earning the astonishment of the cultural world, and its gratitude for their public value. Whether today or tomorrow, we are perhaps providing indispensable elements without even a hint of their future impact”. [38] (p. 93–111)

In this stimulating social environment, André grasped that a great discovery was about to be made. A detailed description of the scientific milieu in Brno can be found in Orel [39] and Poczai [40]. However, it was only in 1814 when the branch of the *Ackerbaugesellschaft* specifically tasked to investigate the problems of heredity was created, usually known as the Sheep Breeders’ Society (SBS) (*Schafzüchtervereinigung*). Inbreeding methods, developed by Robert Bakewell (1725–1795), were also transferred to the Habsburg monarchy by Ferdinand Geisslern (1751–1824) and other members of SBS who visited England. Soon this society became an important melting pot creating a multicultural and interdisciplinary scientific community, which shaped pre-Mendelian heredity research [41]. Sheep breeders, factory owners, businessmen, economists, and academics in Brno—united by their common interest in wool—began discussing how they might increase production and quality [42]; [43] (p. 57–70). They were seeking a scientific basis for breeding by drawing knowledge from several fields to unify them into one interdisciplinary study.

Their prestigious scientific journal, *Economic News and Announcements* (*Oekonomische Neuigkeiten und Verhandlungen*, ONV) was widely distributed in the Habsburg Empire. The journal published cutting-edge research and included various disciplines of animal and plant breeding from practical advice and theoretical innovations to depicting new sheep breeds (Figure 3) and announcing plans for revolutionary machines. Seeking answers to practical problems, they began to ask basic questions about heredity, probing a subject about which very little was known. Members attempted to define a framework of underlying generalizations and explanations to underpin the new empirically developed procedures [44].

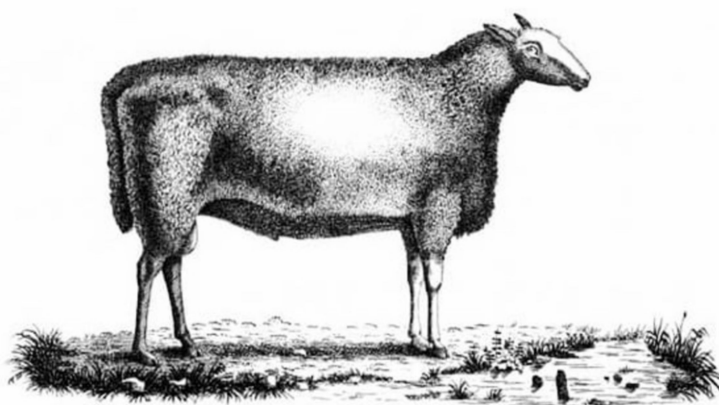


Figure 3. A freshly shorn Dishley ram from ONV 1825 Nr.45. Moravian breeders regarded Robert Bakewell’s sheep race as an example applying inbreeding.

These debates in Brno during the period 1816–20 turned breeding experiments into a body of timeless theory of heredity and reached their peak with the paper written by Count Imre Festetics [45] entitled ‘*About Inbreeding*’ (*Über Inzucht*). By summarizing the results of a series of lasting and elegant breeding experiments, Festetics formulated ‘the genetic laws of nature’ (*die genetischen Gesetze der Natur*). These empirical laws stated that the same hereditary laws apply to all living beings, and were carefully derived from his experiences and observations, when even basic biological mechanisms of reproduction were not understood [46]. Experimental procedures were omitted, and the application of mathematical models in search of heredity was not yet conceived, rather just intuited by Festetics [47], as he said on a meeting that took place on 5 May 1819: “*I believe in the beginning of a new epoch of scientific breeding defined with mathematical precision*” [48]. In responding to C.C. André’s invitation in 1819, Festetics (Figure 4) provided, with his strictly empirical approach, an inspirational stimulus not only for his contemporaries but for future SBS members in their search for the truth about heredity based on the evidence of their own personal experiences of sheep breeding [49].



Figure 4. Imre Festetics lived in the town of Kőszeg, Hungary in the castle displayed on the photograph. From his estates he travelled with his sheep to the meetings of SBS in Brno yearly since 1814. Photo by Bence Gaál, courtesy of the Institute of Advanced Studies Kőszeg (iASK).

Later on, important scientific figures in Brno, such as Johann Karl Nestler (1783–1842) began lecturing about heredity (*Vererbung*) and how the inheritance capacity (*Vererbungs-fähigkeit*) of sheep can be studied [50]. Nestler believed in blending inheritance, which was a commonly held view at the time, and he understood the transmission of traits in a mechanistic way, as defined by Blumenbach’s formative force (*nisus formativus*). However, some members started to call this the “genetic force”, a term derived from contemporary natural historical knowledge and German nature philosophy (*Naturphilosophie*), which they believed is the strongest cause for the form of sheep. For instance, J.M. Ehrenfels:

“Climate, nutrition and generation remain the levers of Nature in the formation of matter. In the interaction of these three potentials, generation, the genetic force is the most powerful”. [51] (p. 137)

At the meeting in 1836, Bartenstein presented an entirely new view on the “genetic force”, which was “possessed by any particular individual” and tried to define it more closely by adding the idea that an individual’s capacity to transmit its traits is necessarily

associated with any other superior quality [52]. The first of Festetics' genetic laws associated heredity with a healthy and robust constitution.

One year later the newly appointed Augustinian abbot of the St. Thomas abbey Cyrill Franz Napp (1792–1867) reminded the members that “the debate has completely deviated from the proper theme of heredity [. . .] the question should be: ‘what is inherited and how?’” [53]. With this statement he formulated a research question, which later motivated Gregor Mendel in his experiments with peas and hawkweed [54–60]. Towards the end of 1837, Nestler published a paper “*Heredity in Sheep Breeding*” in which he wrote:

“The terms species and race in the animal kingdom correspond precisely with the term species and variety in the plant kingdom. Only Nature produces, through forces beyond the hand of Man, under constant environmental conditions, natural species with undoubted constancy. Man, however, produces in the manner of the forces of Nature, in the reproductive process and formation of organic bodies, modified deviations. From the moment of their origin such deviations have the chance of increasing or disappearing in succeeding generations according to their inheritance”. [61] (p. 281–286)

Both Nestler and Napp supported inbreeding tracing back to Bakewell and stressed by Festetics. They were certain that rigorous progeny testing, coupled with stringent selection of individual traits should be carried out to make inheritance more certain. However, members of SBS were reluctant to discuss the topic and they thought inbreeding is not even worth discussing. At the 20th anniversary of Festetics' paper, Nestler published a paper with the same title “*About Inbreeding*” (*Über Inzucht*), where he tried to convince the members of SBS to apply inbreeding in the investigation of the “genetic force” [62]. Nestler's death in 1841 left Franz Diebl (1770–1859) and Napp to encourage the practice and to seek further knowledge of heredity and inbreeding from the breeders' experiences [63].

In contrast to Nestler, Diebl concentrated on plant breeding and stressed the importance of pairing individual plants with different traits to create more productive varieties and he recognized that peas and beans are particularly suitable for inbreeding studies [64]. Diebl [65] published a new book in 1844 entitled “*The Breeding of Fruit Trees, Vines and Forest Trees*” and an enthusiastic student called Johann Gregor Mendel (1822–1884) attended to his lectures and did well in the examinations. In 1845, a new Natural Science Section (NSS) was established within the MAS similar to the sheep breeding section (SBS) composed of members who were not interested in animal and plant breeding. Members including Mendel and E. Festetics met separately and paid attention to technical problems. In 1861, the NSS became independent from the MAS, however E. Festetics did not live long enough to see this as he passed away in 1847. At the meetings, NSS members reported their observations on plant hybrids in nature but only Mendel investigated this topic experimentally. Mendel kept his membership of MAS but in 1866 he chose to publish with the politically more progressive NSS [63].

Each of the three figures, Nestler, Napp and Diebl, played a vital part in promoting the growth of knowledge of breeding in both animals and plants. However, Mendel's motivation on his experimental design has long been debated [66–75]. It has been shown that Napp [60] and Diebl [63] had substantial influence on Mendel, while Nestler's work citing Festetics's [45] paper was also determining in designing his experiments [40,41,76,77]. Research carried out by members of the SBS provided questions for centuries of experimental analysis and was a perfect prelude to Mendel [39,42,78–89]. At this point, the question arises as to why Mendel's ‘research network’ was forgotten?

Breeders were definitely ahead of their time even with their concept as to how they approached investigating a research question closely resembling modern scientific networks. Their audience failed to understand their explanations due to the questions arising from abundant interchanges of ideas within different fields. This cross-fertilization between different scientific fields is nowadays well recognized for encouraging new developments and innovative thinking [90]. In the spirit of the Polányi-Kuhn perspective, e.g. [91,92], a new paradigm was already proposed in 1819 but the scientific revolution they could have

launched never arrived. At least not in Festetics' lifetime, nor in the lifetime of Mendel, nearly 50 years later. However, why was the research on heredity slowed down between 1821–48? There are several answers to this question, but we should take a closer look on the political climate of this period, which reveal unfavorable conditions.

3. Academic Freedom in Central Europe during the Early 19th Century

Sheep breeders were operating at the time of the Holy Alliance, a coalition between Russia, Austria, and Prussia, aiming to limit liberalism and secularism in Europe after the overwhelming Napoleonic wars. The Austrian state chancellor, Klemens Wenzel Nepomuk Lothar, Prince von Metternich-Winneburg zu Beilstein (hereafter Metternich) (1773–1859), often called the “Coachman of Europe”, made his country a bastion against democracy, revolution, and secularism [93] (p. 698). Through the secret police (*Inneres Polizeihofstelle*), Metternich kept an eye on everything and through his contacts, nothing escaped his attention [94] (p. 105). This special unit focused on political and moral (*Sittliche*) crimes committed by foreign or domestic persons engaged in revolutionary, criminal, or immoral activities [95] (p. 39). Beethoven, the famed musician, wrote the following when traveling from Vienna:

“Several important persons have been imprisoned here. It is said that a revolution was about to break out—but I believe that as long as the Austrians have some dark beer and little sausages they will not revolt. Briefly, the gates to the suburbs must be closed at ten in the evening. The soldiers have loaded muskets. One doesn't dare lift his voice here, otherwise the police find lodging for you”. [96] (p. 18)

A huge number of informants were hired to report to the police on the activities and conversations of people in the Austrian public. These reports were delivered to the “Double Emperor” (*Doppelkaiser*), that is, Francis II, nicknamed “the Good”, and to Metternich, “the Coachman”. It is said that Francis's daily *Morgenplaisir* (morning pleasure) consisted in hours spent reading through these reports, while Metternich enjoyed dropping morsels of information gleaned from secret police findings during conversations with foreign diplomats, to cultivate an aura of omnipotence and omniscience [97] (p. 70).

The empire maintained special control over its education system through the secret police to ensure that “subversive” ideas did not infiltrate students and academics [97] (p. 74). Teachers were fired if they “demonstrated their incapacity to fill their offices” or if they “misused their proper influence on the young, spreading harmful theories inimical to the public order and peace or destructive to existing political institutions” [98] (p. 219–220). The secret police wanted to intercept “dangerous thoughts and nip these in the bud” [99] (p. 67), while another special unit (*Oberste Polizei und Cenzurhofstelle*) maintained censorship over the writings of academics (generally over the entire press) keeping a check on any “Jacobin Conspiracy”. After a group of intellectuals formed the ephemeral Hungarian Jacobin movement in private reading clubs (*Lesegesellschaft*) in 1794—in reaction to the restoration of the conservative absolutistic power of Francis II, Metternich, “The Coachman,” leader of the secret police, became obsessed that private learned societies and reading clubs were the cradle of antimonarchist and revolutionist movements. In his letters, Metternich became obsessed by the term “Jacobin”, which he applied to anyone with any kind of liberal tendencies. The most notable example of such an exaggerated use of the term was when he applied it to Russian Emperor Alexander I [100] (p. 556). Francis II, who ascended to the throne in 1792, abandoned the enlightened, absolutist aspirations of his predecessors, Joseph II and Leopold II, and removed previously nominated state officials. This move turned the reformist sentiments against the new regime, who sharply opposed the restoration of the conservative absolutist system. Under the control of Abbé Ignaz Joseph Martinovics (1755–1795), who was involved in state administration, reformers merged into secret societies under the guise of private learned societies and planned to replace the archaic monarchy with a modern democracy. The “New Hungary” was to become a federation and an egalitarian republic, which attracted discontented nobles and radical

intellectuals consisting of university students, poets, physicians, judges, and clergymen. Before police intervention, around 300 members were enrolled in these societies, which were liquidated in the summer of 1794 and conspirators were executed in Pest. The direct impact of the “Jacobian Conspiracy” was hardly significant. However, the fact that it was supported by intellectuals and governmental officials served as a warning to Francis II and Metternich, who reacted by sharpening the government’s trajectory in a more conservative, absolutist direction. In response, he implemented strict measures against the activities of such societies, including the Agricultural Society. Scientific work suffered. In hope of escaping prosecution by the authorities, members published anonymously or used hidden initials in André’s journals who served as its editor-in-chief.

Press releases were subsequently verified, and if dangerous texts were found in newspapers and books in the interests of the state, measures were taken to ban them, confiscate manuscripts and prints and, if necessary, to punish or dismiss censors and writers. The censorship invaded the privacy of even high officers of state and members of the imperial family too. Metternich’s secretary Gentz complained about this in 1832:

“You must realize that the mistrust towards on and all, the espionage against one’s own confidants and the opening of all letters without exception has here reach heights for which there can scarcely be a parallel in all history”. [101] (p. 46)

Hundreds of scholars and academics were fired from teaching positions in the Monarchy for political reasons during the 19th century. Even the titles of books that professors borrowed from libraries were scrutinized by the authorities. Scientific disciplines such as philosophy were barred from the university’s curriculum “in view of the scandalous development of this science” [102] (p. 32). Among other things, students were forbidden to study abroad and they were banned from visiting coffeehouses, reading newspapers or form associations. It is therefore a resounding irony that the revolution of 1848, which nearly tore the Austrian Empire apart, started in Hungary by a bunch of students, scholars, philosophers and poets in the Pilvax coffeehouse. The year 1848 ended a millennium of feudalism in Central Europe. The political and economic changes interrupted communication among Moravian breeders and also heavily influenced the work of Mendel [103].

Most Augustinian friars had enrolled in the Agricultural Society and continued their education at the Philosophical Faculty operating in Brno. Mendel, like the other friars, enrolled in classes taught by Professor Nestler, the department’s head, and Professor Friedrich (Bedřich) Franz (1783–1860), the physics curriculum’s director. Mendel’s certificate verifies that he earned excellent grades in the subjects taught by Diebl and Franz [73]. Around 1830, with the permission of Abbot Napp, one of Mendel’s fellow members, Aurelius Thaler (1796–1843), a well-known mathematician and botanist, developed an experimental plot in the monastery’s garden, where he grew rare exotic plant species. After Thaler’s death, another friar, Matthaeus Klácel (1808–1882), took over the small botanical garden. He was a botanist who was also interested in mineralogy and astronomy. Klácel also debated numerous metaphysical topics with another monk, Tomáš Bratránek (1815–1884). Bratránek was a renowned university teacher, Goethe scholar, and author of publications in natural philosophy who ultimately became Rector of the University of Cracow [104]. Mendel entered the group of these two fellow monks, and Klácel became his tutor before he was dismissed from his job as a philosophy instructor. Klácel was labeled a Haegelian after being accused of pantheistic beliefs. Klácel aspired to be a philosophy professor in Prague, but due to political repression, he was forced to work as a monastery librarian until 1868, when he immigrated to the United States. He left the Church and went on to work as a freelance writer for magazines that advocated for progressive social philosophies till, he eventually became an idealistic atheist. He kept up correspondence with Mendel (see [73]). In response a group of monks including Mendel, drafted a petition “in the interest of mankind” requesting citizenship and scientific freedom to dedicate themselves exclusively to research and education without prejudice (see Supplementary Materials Document S1). The petition was originally discovered by Orel and Verbík [103], later examined by

Nivet [105] who concluded based on the handwriting that the petition was written by Mendel.

4. Spreading Liberal Views and Intellectual Enlightenment through Sheep Breeding

The economic growth of the city resulted in cultural development, including an intense scientific life carried out in private learned societies (*Gesellschaften* or *Privatgesellschaften*), which were characterized by a strong economic, industrial, and agricultural interests permeated by *homeland studies* (*Vaterlandskunde*) [106]. This ideology systematically surveyed all aspects of the state, from astrology, geology, and topography to biological diversity, population statistics, history, and folklore of the time. From 1809 on, André published and edited *Hesperus* (meaning: evening star, golden lamp, the planet Venus), the most important journal of Moravia's liberalism, which was intended to convey modern scientific knowledge and new spiritual directions for the Monarchy's intellectuals [107] (p. 52). Members also represented the Josephine Enlightenment, whose thoughts later developed towards concepts of early liberalism. The Josephine Enlightenment, also called Josephinism, refers to policies issued by "the King of Hats" Joseph II, Holy Roman Emperor (1765–1790). During 1780–1790, Joseph II introduced several reforms and attempted to transform the Habsburg Empire into the most Enlightened state in Europe. Joseph II aimed to develop a unitary state building upon an efficient government with fewer feudal institutions and greater degrees of equality and freedom. His reforms were met with serious opposition across the Empire and eventually, on his deathbed, Joseph II was forced to withdraw all but three of his decrees. André's intention to raise the "the art of animal breeding" to the "status of science" was supported by his elder son Rudolf André (1792–1825), who studied animal breeding and helped his father edit the journals published by MAS. The members of the Society recognized the economic benefits offered by wool and accepted renowned foreign experts of sheep breeding as members. Membership quickly grew to 300–400 [108] (p. 288–289).

Imre (Emmerich) Festetics, who had an ongoing correspondence and active contacts with André and Salm, gained admission and regularly attended Society meetings. Having suffered a major injury in 1790 while serving in the military [109], Festetics subsequently focused on study of the natural sciences and animal breeding, making use of the family's enormous library consisting of 80,000 books housed in Keszthely (Hungary) at Lake Balaton. The library contains many scientific works related to heredity, including those of Georges-Louis Leclerc de Buffon (inbreeding), Johann Friedrich Blumenbach (*nisus formativus* or *Bildungstreib* and writings on human races), Johann Gottfried Herder (genetic force), Johann Wolfgang von Goethe (plant archetype), Aristotle (*Generation of Animals*), Immanuel Kant (*Anlage* and writings on races), Christian Friedrich Samuel Hahneman (*Erzeugungskraft* and *Lebenskraft*), Pierre-Louis Moreau de Maupertuis (notes on generation and polydactyly), René-Antoine Ferchault de Réaumur (notes on the freshwater hydra), Charles Bonnet (heredity and preformed *homunculus*), Claude Perrault (notes on regeneration), among many others. There is also a large collection of books about animal breeding, for example, works of the German agronomist Albrecht Daniel Thaer and George Culley's book on inbreeding [110]. He began experimenting with animal breeding with a strong emphasis on sheep on his estates in Paty (now Kőszegpaty) from 1803 to 1847. Both Imre and his brother, György Festetics (1755–1819) were strong supporters of André's activities in Brno. György became renowned as the founder of the first continental college of agriculture, Georgikon, in Keszthely. The college is still operational today as an independent campus of the Hungarian University of Agriculture and Life Sciences (MATE) in Hungary. The Georgikon model farm conducted experiments, in part with André's supervision and evaluation. André viewed the Georgikon as a pioneer in agricultural sciences that, as an institute of a higher education, elevated the value of private learned societies. The close relationship between the society and the institute is shown in that André himself was briefly an assessor at the Georgikon. Teacher exchange programs and organized study visits promoted the education of plant and animal breeding and were typical between the

Agricultural Society and Georgikon (see [106] (p. 42)), [111] (p. 462). The Moravian Agricultural Society set on the path to become recognized in Europe as a center of excellence in agricultural sciences whose reputation was enhanced by its international connections.

The success of the Moravian textile industry was spurred by the introduction of noble Merino sheep from Spain, which for centuries had been strictly regulated. However, the attempts to introduce these sheep, prized for their “highly esteemed wool, with exceptional fitness, softness and silkiness,” to other European countries failed since the breed quickly degenerated [112]. It was believed that despite great efforts to provide the best feed and housing, the effect of “natural climatic degeneration” (*die natürliche klimatische Rückbildung*) disrupted “the main plasma of the animal organization (*Hauptplasma der thierischen Organisation*)” [29] (p. 92–93). Breeders believed that powerful external environmental forces such as altitude, soil, and foodstuffs played decisive roles in the modification of their livestock [113] (p. 3). Stemming from long-held views, degeneration was associated with hereditary diseases, with divine laws equally valid for animals and humans, both the result of benevolent creation.

The introduction of a mechanistic view allowed eighteenth-century breeders to think of how to better exploit the potential of their livestock. If animals were machines, their bodies could be repaired from the damage caused by external forces or even degeneration. Breeding often resulted in unforeseen changes, thus farmers became aware of the capacity of animals to change under human control. For some breeders, the effect of the seed (a concept that dated back to Hippocrates) was as equally dominant as climate.

Thus, the challenge facing Moravian breeders to improve sheep wool raised the following questions:

1. How can animal body plans be modified? Do climate or seed (i.e., what we know call “genetics”) affect the formation of matter?
2. Can new forms be created through breeding? In other words, can human intervention interfere with God’s creation modifying a stable entity?
3. Do results from animal breeding apply to humans as well? Are humans subjected to the same hereditary degeneration observed in sheep giving rise to monstrosities?

These questions, arising during the Napoleonic Wars, were neither solely philosophical nor theological; they had important economic implications. Thus, breeding became a pivotal issue influencing the outcome of the war. For the members of the Agricultural Society, the mystery of generation (*Zeugung*) was an enthralling scientific question and a new arena of experimental research to investigate. In the early nineteenth century, sheep wool united politics, economics, and science through war. Climate and seed increasingly became essential elements of the discussions of animal breeding in Brno. Members began to scrutinize whether climate or seed had unfavorable influences on continuity between generations. Some believed that the original form of Merinos is maintained due to climatic conditions. Others believed degeneration (*Ausartung*) was related to seed.

Based on trial and error, members increasingly began to believe that controlled up-bringing of animals and selection during breeding complemented each other when applied effectively. The transmission of the seed of an animal might be responsible for stabilizing the breed and for giving rise to new forms. According to Martin Köller’s “law and process of nature” (*das Gesetz und Gang der Natur*), “noble sheep (*edles Schafovieh*) without hereditary defects (*Erbfehler*) crossed with ewes without hereditary defects produce offspring also without such defects” [114] (p. 295). This observation linked the transmission of traits from one generation to another without external influences, proving that the essence of a “noble race” (*Racethiere*) is found in the inner structure of the animals. As a result, the question of generation, which determined scientific thinking on the study of development in the 17th and 18th centuries, became a central issue for animal breeders. During the eighteenth century, the concepts of heredity and development were not distinguished clearly as describing distinct phenomena. For the scientists of this age, heredity constituted only a step within the infinite process of development; it did not occur to them that transmission processes can and should be studied separately. Therefore, they propounded dozens of

theories about the mysterious process called “generation”. Most of them were based on the presumption that a preformed embryo existed in the sperm (seed) or in the ovum (egg). Many scholars considered sperm (seed) as the carrier of hereditary material, while the ovum was akin to the soil on which a seed is planted. The German natural philosopher Blumenbach described epigenetic development to the action of the *Bildungstreib* inherent in living organisms. His work was reviewed in 1797 by C.C. André, who confronted *Bildungstreib* with observed facts noted in animal and plant breeding [115].

André edited a third journal entitled Patriotic Daily News (*Patriotisches Tageblatt*, PTB) from 1800 he reported about the use of breeding methods in England [116]. Although André did not sign the article by name, presumably he wrote it. In 1804, he published the German translation of Culley’s book “*Observations on Livestock*”, which made André publish an animal breeding article—mostly discussing inbreeding methods of Bakewell—in 1809 with a footnote [117]. According to André:

“The English have made the greatest progress, especially in animal husbandry, and through long-term observation and persistent attempts to discover the most correct, safest methods based on the laws of animal reproduction (*die Gesetze der thierischen Fortpflanzung*). [. . .] The application and usefulness of ennoblement (*Veredlung*) is based on the following experiences . . . that can be achieved in three ways: I) inbreeding (in-and-in breeding) pairing individuals of the same race based on valuable characteristics; II) crossing or mixing different races; and III) avoiding further interference and ennobling only through inbreeding. This method is the fastest and most effective way of improvement. However, the prejudice against mating in close relatives must be banished with this refinement”. [117]

According to this footnote, the original article was to be published in the volumes of PTB in 1805, but the publication was interrupted by the sharp reactions of the censors to the idea of inbreeding. With consanguineous matching, there was a chance to fix by “blood” specific traits of animals. Although Bakewell earned great fame, his inbreeding methods were opposed on religious grounds. Proponents of “Divine Law” rejected the consanguineous matching of sheep, which went against the cultural norm of the incest taboo. Gottlieb Carl Svarez (1746–1798), the Prussian jurist and reformer, drew examples from animal breeding in his lectures (1791–1792) to justify the moral objections against incest:

“The reasons for which marriages among close relatives are prohibited are partly physical, partly moral. The physical reasons are based on experience, which one has made with all kinds of animals that from the mixing of too closely related blood, races develop which—in particular when the mixing is continued through several generations—are marked very unfavorably by weakness stupidity, depravity”. [118] (p. 317)

In the early 19th century, only Ferdinand Geisslern (1751–1824), called the “Moravian Bakewell,” and Imre Festetics, the “Hungarian Geisslern,” were applying inbreeding to improve wool quality in Habsburg lands. At that time, the atmosphere was politically overheated due to the Napoleonic wars. However, this discussion was not simply about sheep. As Gianna Pomata [119] (p. 145–152) has shown, the discussion of inheritance stemming from recurrent health problems was also a critique of the aristocratic family model. The hereditary aristocracy rested on the idea of the transmission of “noble essence,” which required a purity of bloodlines untainted by interclass marriage [120] (p. 143). In early 19th century France, physicians abandoned old Galenic traditions and advised noble families—part of the practice called *hérédité*—on how to retain the essence of nobility in their marriages to avoid diseases and defects [121]. Even the lower classes were aware of the “noble diseases” of aristocratic and royal families. The rapidly growing classes of the landless poor, who believed themselves to be the subjects of this hereditary system, mocked the “noble features” and “degeneration” of the aristocracy [122] (p. 155–174). The upper

class viewed the lower classes as threats to the social order [119] (p. 151). Thus, Francis II intended to maintain the traditional social fabric of the empire and enforce aristocratic, class-based structures of inheritance resting on “Christian values.”

The publication of PTB was suspended in 1805 and André published his paper in *Hesperus* [123]. André reacted to the suspension of PTB by planning to leave the Habsburg Empire and to resign as secretary of MAS. As he told his friend Julius Franz Borgias Schneller (1777–1833):

“My Viennese observers, some of whom are very lazy make sure [. . .] I should be afraid that some things will never get into your hands, due to endless espionage. I was forced to leave since they withheld the food for my mind . . . and the Patriotic Daily News had to be stopped. I had no army to command and had no plans to violate the law so I decided to leave, but the Emperor himself kept me back and Count Lažanský, the regional chancellor, requested me in a very flattering official letter to resume my pen again. I made two conditions: first, for a more liberal censorship of my writings, which has rarely been fair to me; and secondly, for the free admission of all books sent to me from abroad as materials”. [124] (p. 335)

5. Sheep Breeders in the Dragnet of the Secret Police

André’s local survival had a decisive impact. He took the organization of private learned societies to the next level and reorganized their activities under a private research institute to study several branches of natural sciences, including, astrology, mineralogy, meteorology, practical agriculture, pomology, animal and plant breeding intellectual life had been blooming in Brno, attracting scholars of various disciplines permeated by the spirit of “homeland studies” (*Vaterlandskunde*). The physicist Franz Ignatz Cassian Hallaschka (František Ignác Kassian Halaška) (1780–1847), for example, established an observatory in Brno and published his observations on sunspots in André’s *Hesperus* [125–128]. André’s editorial concept in *Hesperus* evoked the ideal of English social and economic organization, as well as the idea of a Czech–German–Hungarian scientific cooperation that was related to the idea of the historian Josef Hormayr (1781–1848), who was imprisoned in Spielberg [129]. This prison, or ‘royal seat of the lords of Moravia’ in Brno, was a designated place of exile for political prisoners, which was immortalized by the Italian dramatic poet Silvio Pellico (1789–1854) in his book *My Prisons (Le mie prigioni)*. After his release in 1816, Hormayr lived as a long-term guest in Count Salm’s castle in Rájec-Jestřebí [130]. Moravian aristocrats were strong in their support of the intellectual movement. They openly declared themselves the proponents of freedom of the press, which had fallen under strict censorship. Nobles and sheep breeders promoting economic, cultural, and intellectual development began exchanging their ideas through personal letters across the empire.

Moreover, members of society travelled throughout the empire to debate on various intellectual subjects; for example, Count Salm and Count Imre Festetics exchanged ideas about national movements, linguistics, and poetry [106] (p. 52); [131]. Furthermore, Festetics established a sheep breeding society in Hungary that mirrored the organization of the SBS in Brno, to spread the scientific and intellectual views forged in the “Austrian Manchester”. The members of these “clone” associations travelled to each other’s meetings, where they were also elected as official members. The existence of these societies was viewed, however, as a threat. The secret police thought that such activities could pave the way for the recurrence of revolutionary activities. Powerful movements were at work embodied in a series of natural philosophies that inspired political ideologies. These then melted into and merged with liberalism, which was being promoted in scientific societies like the SBS, but which was also closely watched by the secret police and their informants.

Sheep breeders continued to refine their ideas on breeding principles, and they worked hard to build a solid institutional background for scientific animal as well as plant breeding. Meanwhile, the long, drawn-out war against Napoleon came to an end. The agricultural boom during the war, which had encouraged landowners to borrow money and to buy new estates or to establish wool mills also ended. Most of them went bankrupt after peace

was restored in 1814 [132] (p. 159). The first years of the century, marked by the Napoleonic wars, not only brought frequent changes to the economy and to governmental policies, but also marked the end of educational and scientific institutions. The “Sheepy Bunch” (*Juhos Társaság*) in Brno had to learn how to operate under the newly formed Holy Alliance (1815–1853).

André was hiding under the guise of Austrian patriotism to survive in the relatively unfavorable conditions of late feudal absolutism. The secretly enlightened governor, Count Lažanský, protected André from the censorship of his extensive correspondence with foreign collaborators until his resignation. André and other SBS members, like Salm and Festetics, felt the increasing pressure of censorship by state authorities, when the secret police started to open their private letters. This was done in special mail-opening departments (*Logen*) attached to every major post office [133], where informants copied the content of personal letters. Police reports on the activities of SBS members were signed by Count Josef Sedlnitzky (1778–1855). Moreover, Sedlnitzky used an extensive network of secret agents for surveillance to supplement his reports [134]. In these accounts, André was described as ‘good for nothing and as a ready liar’, while ‘the same description could also be used for his son Rudolf’ [135].

According to Sedlnitzky, André was driven by an insatiable ambition to become a demagogue and a distributor of liberal revolutionary ideas, which was coupled with a morbid vanity [31] (p. 623). His plans to build a research institute to study several branches of natural sciences, including practical agriculture and heredity, was closely followed by the secret police. André and Salm were gathering funds among aristocrats from the Auersperg and Mitrovský families to support the establishment of the institute. Seeking advice, they actively corresponded with Count Ferenc Széchenyi (1754–1820), who founded the National Library and the National Museum of Hungary in Buda/Pest [130]. André’s activities were suspicious in the eyes of ‘The authorities’ who were doubtful about the views that would be spread in the newly opened institute. To mitigate any concern, André and Salm named the new institute after the emperor, Franzes-Museum (now the Moravian Museum) in Brno established in July 1817.

Further suspicion arose after the debates about inbreeding in May of 1817 championed by Festetics, leading to his publication “*About Inbreeding*” [45]. A sign of the new and lively interest in biological inheritance in Brno was echoed in the pages of ONV, which appeared in volumes vol. 19 and 20 and supplements in 1820. Festetics’s inbreeding methods were conceived as innovative and as challenging old incest taboos. The acceptance of these breeding methods required the separation of religious and biological questions—a step, which many were not yet willing to take (see [136]). Incestuous relationships were prohibited; thus, sheep created through this inbreeding process were regarded as monstrous creations of nature. Sheep were also viewed as religious Christian symbols, which were now dancing with the morals created in complete freedom from the bonds of matter through inbreeding. Society was unwilling to accept the artificial modification of nature.

The Franzes-Museum opened on 5 May 1820 and Festetics offered his best inbred rams to the new institute to challenge pre-existing frameworks with a greater potential to trigger the formulation of further evidence in the study of heredity [137]. André surrendered as a successful organizer of scientific progress in Brno on 20 May 1820 by resigning as the leader of the SBS [138]. Many members followed André, while Count Salm formulated a petition in which he praised André’s merits and asked the members of the SBS to support it. Festetics wrote in favor of André that ‘he has been inspired to visit the Olympus of Agriculture, which widened his knowledge, and he became more enlightened’ [137]. Nevertheless, no praise or action on behalf of this committed teacher, writer, economic adviser, organizer, however justified, was sufficient to prevent the axe from finally falling [77].

6. Inbreeding Based Heredity Research Nipped in the Bud

According to the police reports, André was forced to leave Brno in September of 1821 and he became persona non grata in the Monarchy for his views. He moved to the cloth-manufacturing city of Stuttgart and became the adviser to the Prussian King, Wilhelm I. His departure was, at a minimum, a symbol of the restrictions that inhibited intellectual life in Brno [34]. To quote Emperor Francis II himself from 1821:

“I have no use for scholars, but only for good citizens. It is up to you to mold our youth in this sense. Whoever serves me must teach what I command; those who cannot do this or who engender new ideas can leave, or I shall get rid of him”. [139]

With André’s exile, Moravia lost the pioneer of the industrial and agricultural revolution. Therefore, the further development of natural science and further discussions about heredity and inbreeding was slowed down. Later on, Festetics [131] wrote to Salm that his heart was broken and that he ‘feels that everything that they have been working on for the last two decades is now lost’.

André’s physical separation and the ‘criminalization’ of his work created a credibility gap among the members of the society in terms of continuing the investigations of heredity and inbreeding. Sheep breeders, scientists, and society itself was divided. One camp—previously led by André, Festetics and Salm—was supporting inbreeding to create ‘noble’ lines of sheep to ‘concentrate’ valuable characteristics. On the other hand, there were those who feared the unpredictability and the danger of disastrous consequences arising from such inbreeding, particularly in terms of fertility. This controversy was heightened by religious considerations about incestuous mating, thereby transgressing God-given law [77].

Without André, it was impossible to shift the balance in support of inbreeding. André tried to continue his work in Brno through his son Rudolf, but the work of the secret police did not allow this, as the harassment of those supporting inbreeding continued. The letters sent to André by the sheep breeders were first sent to Salm in Rájec-Jestřebí, according to Festetics [131]. Salm then sent these letters to Stuttgart by way of the publisher Johann Friedrich Cotta to escape the attention of the secret police. The ploy did not work. Letters were intercepted and communication with André became almost impossible. André lost his son possibly to pneumonia in 1825, isolating him even more from Brno. He asked help from the members of SBS and volunteers to continue his editorial work and influence on scientific development [140]. A few years later (1831) André passed away, soon followed by Hugo Salm (1836). Perhaps in fear of the secret police and of losing his land in consequence, Festetics no longer spoke of inbreeding, at least according to our current knowledge. His brother György (Georg) Festetics (1755–1819), the founder of the first agricultural college in Europe, Georgikon where André was an assessor in 1821 was already under the surveillance by the secret police. György, as a Graeven Hussar regiment officer, was one of the signatories to the application of the order of Bratislava (Pozsony) and become disgraced in the monarchy [141]. After the events, he retired to his estates in Keszthely at lake Balaton where the family housed an enormous library of 80,000 volumes of books constantly used by Imre Festetics. In 1797, at the Zala County General Assembly, György voted against the insurrection of the French Revolution. As a result, György Festetics lost his chamber key and Francis II forbade his appearance at the court [141]. György then withdrew from any open political action but did not disclose the aims of education. The secret police were constantly inspecting him, which made his collaboration with Imre difficult. According to Albrecht Thaer in 1823, the Sheep Breeders’ Society was dead [138]. In Stuttgart, André continued to publish the journal *Hesperus* where he openly spoke about the censorship against him and against the Moravian Agricultural Society, for example in his paper “*Price of Hundred Ducats*” (Supplementary Materials Document S2) [142].

7. Conclusions

Debates about sheep breeding with scholarly deliberations on the question of heredity were deeply intertwined with philosophical and political questions in the early 19th century. While breeders already put their knowledge into practice on the transformation of races,

from one to another, theoreticians, society, and the state power were more skeptical about the significance and permanence of such changes. Proponents of “Natural Law” rejected the incest taboo as a cultural norm; they were, however, bound to frameworks that were more traditional. Deviations from the “original form” of animals were understood as degenerations, and such monstrous creatures were not allowed to have a lasting influence on nature’s overall design [136]. It is more than remarkable that the peculiar interest in heredity reached its peak at a time when the political repercussions of “the genetic laws of nature”—with its claim of natural equality—were strongest.

This new attention to hereditary could only emerge against the backdrop of the promise of natural equality. Once this promise had been stated, it required immediate political intervention from the state power to nip such liberal views in the bud. This political background in Brno may finally explain, at least in part, the attitude (neglect) of Mendel towards the sheep breeders and even more, the half-century long neglect of Mendel’s own discoveries [143].

This case from 19th-century Brno offers a stark warning against political interference with science. Indeed, the fate of pre-Mendelian heredity research in the Habsburg Empire is a clear-cut example of direct suppression. This kind of unfortunate political interference with science is something that we still need to be on the lookout for today.

Supplementary Materials: The following are available online at <https://www.mdpi.com/article/10.3390/philosophies6020041/s1>, Document S1: Petition of six Augustinian friars, Document S2: The price of hundred ducats by C.C. André.

Author Contributions: Conceptualization, P.P. and A.T.S.; investigation, P.P., J.A.S.-B., A.T.S. and J.S.; resources, P.P., J.A.S.-B. and J.S.; writing—original draft preparation, P.P.; writing—review and editing, P.P., J.A.S.-B., J.S. and A.T.S., project administration, P.P.; funding acquisition, P.P. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by iASK, Hungary (PP-1/2019/21) and the British Society for the History of Science (BSHS). Open access was funded by Helsinki University Library.

Acknowledgments: We would like to thank several individuals and institutions for their help and support on many fronts: István Bariska for transcription and translation of handwritten documents; Lisa Muszynski for much help in revising the manuscript; David Adamčík National Heritage Institute, Czech Republic for the portrait of Hugo Salm; Michaela Růžicková and Jana Barinová from the Moravian Archive in Brno for arranging the documents and letters on behalf of our research; Herbert Hutterer from the Austrian State Archives for providing access to the archival records of research works that were burnt; András Oross from the Hungarian Archival Delegation at the *Haus-, Hof- und Staatsarchiv* in Vienna for locating and arranging the reprints for us; the Royal Library of Belgium in Brussels for providing access to their collections. We also thank volunteering translators of the Smithsonian Institution Hela Finberg, Rosanne Johnson and Anne Schwermer offering invaluable help. Thanks also go to anonymous referees and editors for their valuable comments on the earlier drafts.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

References

1. Wilson, E.O. *Consilience: The Unity of Knowledge*; Vintage Books: New York, NY, USA, 1999; pp. 129–138.
2. Sober, E. Empiricism. In *The Routledge Companion to Philosophy of Science*; Martin, C., Stathis, P., Eds.; Routledge: New York, NY, USA, 2008; pp. 129–138.
3. Sagan, C. The Charlie Rose Show. In *Conversations with Carl Sagan*; Tom, H., Ed.; University Press of Mississippi: Jackson, MS, USA, 2006; pp. 141–151.
4. Soyfer, V.N. The consequences of political dictatorship for Russian science. *Nat. Rev. Genet.* **2001**, *2*, 723–729. [CrossRef] [PubMed]
5. Wellerstein, A. The myth of apolitical science. *Science* **2018**, *362*, 1006. [CrossRef]
6. Penders, B. Marching for the myth of science: A self-destructive celebration of scientific exceptionalism. *EMBO Rep.* **2017**, *18*, 1486–1489. [CrossRef]
7. Castoriadis, C. *Philosophy, Politics, Autonomy*; Oxford University Press: Oxford, UK, 1991; p. 143.

8. Weingart, P. Scientific expertise and political accountability: Paradoxes of science in politics. *Sci. Public Policy* **1999**, *26*, 151–161. [\[CrossRef\]](#)
9. Wolfe, A.J. *Freedom's Laboratory, the Cold War Struggle for the Soul of Science*; Johns Hopkins University Press: Baltimore, MD, USA, 2018.
10. Smith, M.K.; Wood, W.B. Teaching genetics: Past, present, and future. *Genetics* **2016**, *204*, 5–10. [\[CrossRef\]](#)
11. Stetten, D. Freedom enquiry. *Genetics* **1975**, *81*, 415–425. [\[CrossRef\]](#)
12. Varshavsky, A. The 2000 Genetics Society of America medal jack W. Szostak. *Genetics* **2001**, *157*, 465–466. [\[CrossRef\]](#)
13. Cande, W.Z.; Freeling, M. Inna Golubovskaya: The life of a geneticist studying meiosis. *Genetics* **2011**, *188*, 491–498. [\[CrossRef\]](#)
14. Dove, W.F. Weaving a tapestry from threads spun by geneticists: The series Perspectives on Genetics, 1987–2008. *Genetics* **2016**, *203*, 1011–1022. [\[CrossRef\]](#) [\[PubMed\]](#)
15. Charlesworth, D. Mogens Westergaard's contributions to understanding sex chromosomes. *Genetics* **2018**, *210*, 1143–1149. [\[CrossRef\]](#) [\[PubMed\]](#)
16. Soyfer, V.N. Tragic history of the VII International Congress of Genetics. *Genetics* **2003**, *165*, 1–9. [\[CrossRef\]](#)
17. Bengtsson, B.O.; Tunlid, A. The 1948 International Congress of Genetics in Sweden: People and politics. *Genetics* **2010**, *185*, 709–715. [\[CrossRef\]](#) [\[PubMed\]](#)
18. Gross, C.A. The 2000 Thomas Hunt Morgan Medal Evelyn M. Witkin. *Genetics* **2001**, *157*, 459–460. [\[CrossRef\]](#)
19. Crow, J.F. NI Vavilov, Martyr to genetic truth. *Curr. Sci.* **1994**, *66*, 790–792.
20. Crow, J.F.; Owen, R.D. Kay Wilson and the NIH Genetics study section. *Genetics* **2000**, *155*, 1–5. [\[CrossRef\]](#)
21. Szybalski, W. My Road to Øjvind Winge, the Father of Yeast Genetics. *Genetics* **2001**, *158*, 1–6. [\[CrossRef\]](#) [\[PubMed\]](#)
22. Grossbach, U. Seventy-five years of developmental genetics: Ernst Caspari's early experiments on insect eye pigmentation, performed in an academic environment of political suppression. *Genetics* **2009**, *181*, 1175–1182. [\[CrossRef\]](#)
23. Teicher, A. Caution, overload: The troubled past of genetic load. *Genetics* **2018**, *210*, 747–755. [\[CrossRef\]](#) [\[PubMed\]](#)
24. Paul, D.H.J. Muller, communism, and the Cold War. *Genetics* **1988**, *119*, 223–225. [\[CrossRef\]](#)
25. Carlson, E.A. Speaking out about the social implication of science: The uneven legacy of H.J. Muller. *Genetics* **2011**, *187*, 1–7. [\[CrossRef\]](#)
26. Paleček, P. Vítězslav Orel (1926–2015): Gregor Mendel's biographer and the rehabilitation of genetics in the Communist Bloc. *Hist. Phil. Life Sci.* **2016**, *38*, 4. [\[CrossRef\]](#) [\[PubMed\]](#)
27. Matlová, A.; Sekerák, J. *Genetics behind the Iron Curtain: Its Repudiation and Reinstitutionalisation in Czechoslovakia*; Moravian Museum: Brno, Czech Republic, 2004.
28. André, C.C. Anernieten, Gutbesitzern auf dem kürzesten und sichersten Wege zur höchsten Veredlung ihrer Schafherden behüflich zu seyn. *Oekonomische Neuigk. Verh.* **1812**, *24*, 181–183.
29. Ehrenfels, J.M. Ueber die höhere Schafzucht in Bezug auf die bekannte Ehrenfelsische Race. Belegt mit Wollmustern, welche die dem Herausgeber in Brünn zu sehen sind. *Oekonomische Neuigk. Verh.* **1817**, *11*, 81–85, *12*, 89–94.
30. Wood, R.J. Robert Bakewell (1725–1795) pioneer animal breeder and his influence on Charles Darwin. *Fol. Mendel.* **1973**, *8*, 231–242.
31. Novotný, G. Christian Carl André and his Sons Rudolf and Emil Karl: Pathways to a Monograph on their Work in Moravia. In *A Tribute to Jan Janák: The Chairman of the Moravian Matice, the Professor of Masaryk University, Devotes His Friends and Pupils to His 70s*; Chocholáč, B., Malíř, J., Eds.; Matice moravská: Brno, Czech Republic, 2002; pp. 617–631.
32. Franke, H.; Orel, V. Christian Carl André (1763–1831) as a mineralogist and an organizer of scientific sheep breeding in Moravia. In *Gregor Mendel and the Foundation of Genetics*; Vítězslav, O., Anna, M., Eds.; Moravian Museum: Brno, Czech Republic, 1983; pp. 47–56.
33. Stránská, E.; Stránský, Z.Z. *Basics of Museology Study*; UMB: Banská Štiavnica, Slovakia, 2000.
34. Freudenberg, H. *Lost Momentum: Austrian Economic Development 1750s–1830s*; Bohlau Verlag: Vienna, Italy, 2003.
35. Esparza, J.; Schrick, L.; Damaso, C.R.; Nitsche, A. Equination (inoculation of horsepox): An early alternative to vaccination (inoculation of cowpox) and the potential role of horsepox in the origin of the smallpox vaccine. *Vaccine* **2017**, *35*, 7222–7230. [\[CrossRef\]](#)
36. Sedlářová, J. *Hugo Franz Salm, Pioneer of the Industrial Revolution: Iron Mogul-Patron-Collector-Philanthropist*; NPÚ ÚPS: Kroměříž, Czech Republic, 2016; pp. 1776–1836.
37. Berend, I.T. *Case Studies on Modern European Economy: Entrepreneurs, Inventions, Institutions*; Routledge: New York, NY, USA, 2013.
38. André, C.C. Rede, bey der ersten Eröffnung der Vereinigten Gesellschaft des Ackerbaues . . . , Erster. In *Schematismus der K. K; Mährisch-Schlesischen Gesellschaft*; Brünn, Czech Republic, 1815.
39. Orel, V. The scientific milieu in Brno during the era of Mendel's research. *J. Hered.* **1973**, *64*, 314–318. [\[CrossRef\]](#) [\[PubMed\]](#)
40. Pocza, P. *A Festetics Rejtély: A Genetika Története és Festetics Imre Elfelejtett Hagyatéka [The Festetics Mystery: The history of Genetics and the Forgotten Legacy of Imre Festetics]*; Iask: Kőszeg, Hungary, 2019.
41. Pocza, P.; Neil, B.; Hyvönen, J. Imre Festetics and the sheep breeders' society of Moravia: Mendel's forgotten "research network". *PLoS Biol.* **2014**, *1*, e1001772. [\[CrossRef\]](#)
42. Orel, V.; Wood, R.J. Early development in artificial selection as a background to Mendel's research. *Hist. Phil. Life Sci.* **1981**, *3*, 145–170.

43. Wood, R.J.; Orel, V. The sheep breeders' legacy to Gregor Mendel. In *Gregor Mendel and the Foundation of Genetics*; Orel, V., Matlová, A., Eds.; Moravian Museum: Brno, Czech Republic, 1982; pp. 57–70.
44. Wood, R.J.; Orel, V. Scientific breeding in Central Europe during the early nineteenth century: Background to Mendel's later work. *J. Hist. Biol.* **2005**, *38*, 239–272. [[CrossRef](#)]
45. Festetics, E. Weitere Erklärung des Herrn Grafen Emmerich Festetics über Inzucht. *Oekonomische Neuigk. Verh.* **1819**, *22*, 169–170.
46. Szabó, T.A.; Poczai, P. The emergence of genetics from Festetics' sheep through Mendel's peas to Bateson's chickens. *J. Genet.* **2019**, *98*, 63. [[CrossRef](#)] [[PubMed](#)]
47. Festetics, E. Bericht des Herrn Emmerich Festetics als Repräsentanten des Schafzüchter-Vereins im Eisenburger Comitate. *Oekonomische Neuigk. Verh.* **1820**, *4*, 25–27.
48. Salm, H.F. Fortsetzung des Auszugs aus dem Vertrage des Herren Präses Grafen Salm, Direktors der Ackerbaugesellschaft. *Oekonomische Neuigk. Verh.* **1820**, *5*, 33–34.
49. Wood, R.J. Imre Festetics and the genetic laws of nature in light of the contemporary ideas of heredity by blood. *Mo. Tud.* **2015**, *176*, 439–452.
50. Nestler, J.K. Ueber den Einfluss der Zeugung auf die Eigenschaften der Nachkommen. *Mittheilungen* **1829**, *47*, *48*, *50*, *51*, 369–372, 377–380, 394–398, 401–404.
51. Ehrenfels, J.M. Fortsetzung der Gedanken des Herrn Moritz Beyer über das Merinoschaf. *Mittheilungen* **1831**, *18*, 137–142.
52. Teindl, F.; Hirsch, J.; Lauer, C. Protokoll über die Verhandlungen bei der Schafzüchter-Versammlung in Brno am 9. und 10. Mai 1836. *Mittheilungen* **1836**, *38–39*, 303–309, 311–317.
53. Bartenstein, E.; Teindl, F.; Hirsch, J.; Lauer, C. Protokoll über die Verhandlungen bei der Schafzüchter-Versammlung in Brünn in 1837. *Mittheilungen* **1837**, *27*, *29*, *30*, 210–215, 225–231, 233–238.
54. Klein, J. Johann Mendel's field of dreams. *Genetics* **2000**, *156*, 1–6. [[CrossRef](#)]
55. Sandler, I. Development: Mendel's legacy to Genetics. *Genetics* **2000**, *154*, 7–11. [[CrossRef](#)]
56. Nogler, G.A. The lesser-known Mendel: His experiments on *Hieracium*. *Genetics* **2006**, *172*, 1–6. [[CrossRef](#)]
57. Van Dijk, P.J.; Elis, T.H.N. The full breadth of Mendel's genetics. *Genetics* **2016**, *204*, 1327–1336. [[CrossRef](#)]
58. Abbott, S.; Daniel, J. Fairbanks. Experiments on plant hybrids by Gregor Mendel. *Genetics* **2016**, *204*, 407–422. [[CrossRef](#)]
59. Zhang, H.; Wen, C.; Kun, S. Mendelism: New insights from Gregor Mendel's lectures in Brno. *Genetics* **2017**, *207*, 1–8. [[CrossRef](#)]
60. van Dijk, P.J.; Weissing, F.J.; Ellis, T.H.N. How Mendel's interest in inheritance grew out of plant improvement. *Genetics* **2018**, *210*, 347–355. [[CrossRef](#)]
61. Nestler, J.K. Ueber Vererbung in der Schafzucht. *Mittheilungen* **1837**, *36*, 281–286.
62. Nestler, J.K. Ueber Innzucht. *Mittheilungen* **1839**, *16*, 121–128.
63. Orel, V.; Wood, R.J. Essence and origin of Mendel's discovery. *Comptes rendus de l'Académie des Sciences de la vie/Life Sci.* **2000**, *323*, 1037–1041. [[CrossRef](#)]
64. Diebl, F. *Abhandlungen aus der Landwirtschaftskunde für Landwirthe, Besonders aber für Diejenigen, Welche sich der Erlernung dieser Wissenschaft Widmen*; R.A. Fisher Verlag: Brünn, Czech Republic, 1835–1841; Volume 1–4.
65. Diebl, F. *Lehre von der Baum-Zucht überhaupt, und von der Obstbaumzucht, dem Weinbaue und der Wilden—oder Waldbaumzucht Insbesondere*; L. Fritz: Brno, Czech Republic, 1844.
66. Iltis, H. *Gregor Johann Mendel: Leben, Werk und Wirkung*; Springer: Berlin, Germany, 1924.
67. Richter, O. Johann Gregor Mendel wie er wirklich war. *Verh. Nat. Ver. Brunn.* **1943**, *74*, 1–263.
68. Olby, R.C. *Origins of Mendelism*, 2nd ed.; University of Chicago Press: Chicago, IL, USA, 1985.
69. Weiling, F. Historical study: Johann Gregor Mendel 1822–1884. *Am. J. Med. Genet.* **1991**, *40*, 1–25. [[CrossRef](#)]
70. Hartl, D.L.; Orel, V. What did Gregor Mendel think he discovered? *Genetics* **1992**, *131*, 245–253. [[CrossRef](#)]
71. Novitski, C.E. Revision of Fisher's analysis of Mendel's garden pea experiments. *Genetics* **2004**, *166*, 1139–1140. [[CrossRef](#)] [[PubMed](#)]
72. Hartl, D.L.; Fairbanks, D.J. Mud sticks: On the alleged falsification of Mendel's data. *Genetics* **2007**, *175*, 975–979. [[CrossRef](#)] [[PubMed](#)]
73. Orel, V. *Gregor Mendel: The First Geneticist*; Oxford University Press: Oxford, UK, 1996.
74. Churchill, G.A. When are results too good to be true? *Genetics* **2014**, *198*, 447–448. [[CrossRef](#)] [[PubMed](#)]
75. Fairbanks, D.J.; Abbot, S. Darwin's influence on Mendel: Evidence from a new translation of Mendel's paper. *Genetics* **2016**, *204*, 401–405. [[CrossRef](#)] [[PubMed](#)]
76. Orel, V. Heredity in the teaching programme of professor JK Nestler (1783–1841). *Acta Univ. Palacki. Olomuc. Fac. Rer. Nat.* **1978**, *59*, 79–98.
77. Wood, R.J.; Orel, V. *Genetic Prehistory in Selective Breeding: A Prelude to Mendel*; Oxford University Press: Oxford, UK, 2001.
78. Orel, V. *Gregor Mendel, Zakladatel Genetiky: Populárně Vědecký Sborník*; Blok: Brno, Czech Republic, 1965.
79. Orel, V. The prediction of the laws of hybridization in Brno already in 1820. *Fol. Mendel.* **1974**, *9*, 245–254.
80. Orel, V. The building of greenhouses in the monastery garden of Old Brno at the time of Mendel experiments. *Fol. Mendel.* **1975**, *10*, 201–208.
81. Orel, V. Selection practice and theory of heredity in Moravia before Mendel. *Fol. Mendel.* **1977**, *12*, 179–221.
82. Orel, V. Mendel's achievements in the context of the cultural peculiarities of Moravia. In *Gregor Mendel and the Foundation of Genetics*; Vítězslav, O., Anna, M., Eds.; Moravian Museum: Brno, Czech Republic, 1983; pp. 23–46.

83. Orel, V. Genetic laws published in Brno in 1819: Proceedings of the Greenwood Genenetic Center. *Greenwood* **1989**, *8*, 81–82.
84. Orel, V. The spectre of inbreeding in the early investigation of heredity. *Hist. Phil. Life Sci.* **1997**, *19*, 315–330.
85. Orel, V. Contested memory: Debates over the nature of Mendel's paradigm. *Hereditas* **2005**, *142*, 98–102. [CrossRef] [PubMed]
86. Orel, V.; Fantini, B. The enthusiasm of the Brno Augustinians for science and their courage in defending it. In *Gregor Mendel and the Foundation of Genetics*; Orel, V., Matlová, A., Eds.; Moravian Museum: Brno, Czech Republic, 1983; pp. 105–110.
87. Orel, V.; Wood, R.J. Empirical genetic laws published in Brno before Mendel was born. *J. Hered.* **1998**, *89*, 79–82. [CrossRef]
88. Orel, V.; Wood, R.J. Scientific animal breeding in Moravia before and after the discovery of Mendel's theory. *Q. Rev. Biol.* **2000**, *75*, 149–157. [CrossRef]
89. Orel, V.; Peaslee, M.H. Mendel's research legacy in the broader historical network. *Sci. Educ.* **2015**, *24*, 9–27. [CrossRef]
90. Herrera, M.; Roberts, D.C.; Gulbahce, N. Mapping the evolution of scientific fields. *PLoS ONE* **2010**, *5*, e10355. [CrossRef]
91. Polanyi, M. *Personal Knowledge: Towards a Post-Critical Philosophy*; Routledge: London, UK, 1958.
92. Kuhn, T. *The Structure of Scientific Revolutions*, 2nd ed.; University of Chicago Press: Chicago, IL, USA, 1962.
93. Proudhon, P.-J. The federative principle and the necessity of reconstituting the party of the revolution. In *Property is Theft! A Pierre-Joseph Proudhon Anthology*; MacKay, I., Ed.; AK Press: Edinburgh, UK, 2011; pp. 689–714.
94. Sauvigny, G.d.B. *Metternich and His Times*; Darton, Longman and Todd: London, UK, 1962.
95. Hanson, A.M. *Musical Life in Biedermeier Vienna*; Cambridge University Press: Cambridge, MA, USA, 1985.
96. Prod'homme, J.-G. Beethoven to Simrock, 2 August 1794. In *The Letters of Beethoven*; Anderson, E., Ed.; Macmillan: London, UK, 1961; pp. 17–19.
97. Goldstein, R.J. *Political Repression in 19th Century Europe*; Barnes and Noble Books: Totowa, NJ, USA, 1983.
98. McClelland, C.E. *State, University and Society in Germany, 1700–1914*; Cambridge University Press: Cambridge, MA, USA, 1980.
99. Doyle, W. *The Old European Order, 1660–1800*; Oxford University Press: Oxford, UK, 1978.
100. Phillips, W.A.; Alexander, I. *Encyclopaedia Britannica. 1*; Chrisholm, H., Ed.; Cambridge University Press: Cambridge, MA, USA, 1911.
101. Sked, A. *The Decline and Fall of the Habsburg Empire*, 2nd ed.; Routledge: New York, NY, USA, 2013; pp. 1815–1848.
102. Alston, P.L. *Education and the State in Tsarist Russia*; Stanford University Press: Stanford, CA, USA, 1969.
103. Orel, V.; Verbík, A. Mendel's involvement in the plea for freedom on teaching in the revolutionary year of 1848. *Fol. Mendel.* **1984**, *19*, 223–233.
104. Cox, T.M. Mendel and his legacy. *QJM Int. J. Med.* **1999**, *92*, 183–186. [CrossRef]
105. Nivet, C. 1848: Gregor Mendel, the monk who wanted to be a citizen. *Med. Sci.* **2006**, *22*, 430–433.
106. Deák, E. Scientific life in Bohemia and Moravia, and its connections with Hungary during the Enlightenment. *Aetas* **2001**, *3–4*, 29–45.
107. Pražák, R.; Deák, E.; Erdélyi, L. *Francis Széchenyi and the Czech Republic*; Gondolat Kiadó: Budapest, Hungary, 2003.
108. Blum, J. *The End of the Old Order in Rural Europe*; Princeton University Press: Princeton, NJ, USA, 1978.
109. Szabó, T.A. Imre Festetics (1764–1847). *Vasi Szemle* **1991**, *45*, 91–97.
110. Helikon Castle Museum Library. Available online: <http://corvina.monguz.hu:8080/WebPac.hkmdb/CorvinaWeb> (accessed on 17 May 2021).
111. Stohl, R. Albums of László Festetics. In *Lymbus, Magyarságtudományi Forrásközlemények*; Ujváry, G., Ed.; MTA-BTK and OSZK: Budapest, Hungary, 2018; pp. 459–494.
112. Youatt, W. *Sheep: Their Breeds, Management and Diseases to Which Is Added the Mountain Shepherd's Manual*; Baldwin and Craddock: London, UK, 1837.
113. Sinclair, J. *Address to the Society for the Improvement of British Wool*; T. Cadell: London, UK, 1791.
114. Anonymous. Ist es nothwendig, zur Erhaltung einer edlen Schafherde stets fremde Original-Widder nachzuschaffen, und artet sie aus, wenn sich das verwandte Blut vermischt? *Oekonomische Neuigk. Verh.* **1811**, *37*, 294–298.
115. André, C.C. *Der Zoologe, oder Compendiöses Bibliothek des wissens würdigen aus der Thier Geschichte und allgemeinen Naturkunde*; J.J. Gebauer Verlag: Eisenach/Halle, Germany, 1797.
116. Anonymous. Schafzucht. *Patriotisches Tageblatt* **1800**, *12*, 47.
117. Anonymous. Ueber die Veredlung der Hausthiere. *Hesperus* **1809**, *1–3*, 94–101.
118. Svarez, C.G. Darstellung einiger besonders wichtiger Materien. Über die Ehe. In *Vorträge über Recht und Staat*; Conrad, H., Kleinheyder, G., Eds.; Westdeutscher Verlag: Köln, Germany, 1960.
119. Pomata, G. Comments on Session III: Heredity and Medicine. In *Conference: A Cultural History of Heredity II: 18th and 19th Centuries, Prepoint*; Max-Planck-Institute for the History of Science: Berlin, Germany, 2003; Volume 247, pp. 145–152.
120. Wilson, P.K. Erasmus Darwin and the “noble” disease (gout): Conceptualizing heredity and disease in Enlightenment England. In *Heredity Produced: At the Crossroads of Biology, Politics and Culture*; Müller-Wille, S., Rheinberger, H.-J., Eds.; MIT Press: Cambridge, MA, USA, 2007; pp. 1500–1870.
121. López-Beltrán, C. In the cradle of heredity; French physicians and *L'Hérédité Naturelle* in the early 19th century. *J. Hist. Biol.* **2004**, *37*, 39–72. [CrossRef] [PubMed]
122. Cartron, L. Degeneration and “Alienism”. In *Early Nineteenth-Century France*; Müller-Wille, S., Rheinberger, H.-J., Eds.; Heredity Produced: At the Crossroads of Biology, Politics and Culture; MIT Press: Cambridge, MA, USA, 2007; pp. 1500–1870.

123. Austrian State Archives (Österreichisches Staatsarchiv), Vienna. Censorship against C.C. André's *Patriotische Tageblatt*, AT-OeStA/AVA Inneres PHSt Z 190. Available online: <https://www.oesta.gv.at/> (accessed on 12 March 2018).
124. Münch, E. *Julius Schneller's Lebensumriss und Vertraute Briefe an Seine Gattin und Seine Freunde*; J. Scheible: Leipzig, Germany, 1834.
125. Hallaschka, F.I.C. Ephemeriden der beobachteten Sonnenflecken vom 9. April bis 3. Mai 1814. *Hesperus* **1814**, 37, 295.
126. Hallaschka, F.I.C. Beobachtete Sonnenflecken am 28. Februar bis 15. März 1816. *Hesperus* **1816**, 4, 25.
127. Hallaschka, F.I.C. Fortsetzung der Beobachtungen der Sonnenflecken von 4. April bis 1. August 1816. *Hesperus* **1816**, 61, 495.
128. Carrasco, V.M.S.; Vaquero, J.M.; Artl, R.; Gallego, M.C. Sunspot observations made by Hallschka during the Dalton minimum. *Sol. Phys.* **2018**, 293, 1–10. [CrossRef]
129. Almási, G. Faking the national spirit: Spurious historical documents in the service of the Hungarian National Movement in the early nineteenth century. *Hung. Hist. Rev.* **2016**, 5, 225–249.
130. National Széchényi Library (OSZK), Budapest, Hungary. Correspondence of Hugo Salm and Ferenc Széchényi, OSZK Fol. Germ. 803 and MOL P623. 1816. Available online: <http://www.oszk.hu/en> (accessed on 20 April 2018).
131. Moravian Archive (MZA) in Brno, Czechia. Historic letters of the Moravian Agricultural Society (1810–1823), G150/K80 and K81. Available online: <https://www.moravianchurcharchives.org/> (accessed on 13 June 2018).
132. Cartledge, B. *The Will to Survive. A History of Hungary*; Columbia University Press: New York, NY, USA, 2011.
133. Deák, Á. The State Police in Hungary, 1849–1875. Ph.D. Thesis, Hungarian Academy of Sciences, Budapest, Hungary, 2013.
134. Pajkossy, G. A secret agent in Pest during the mid-reform era. *Aetas* **2006**, 4, 5–20.
135. Austrian State Archives (Österreichisches Staatsarchiv), Vienna. Secret police report on the description of the personality of Rudolf and C. C. André by state authorities, AT-OeStA/AVA Inneres PHSt 1823-9239 (Karton 1065), Fol 23. Available online: <https://www.oesta.gv.at/> (accessed on 12 March 2018).
136. Lehleiter, C. *Romanticism, Origins and the History of Heredity: New Studies in the Age of Goethe*; Bucknell University Press: London, UK, 2014.
137. Festetics, E. Äußerung des Herrn Grafen Festetics. *Oekonomische Neuigk. Verh.* **1820**, 15, 115–119.
138. Anonymous. Mährischer Schafzüchter-Verein im Jahre 1822. *Oekonomische Neuigk. Verh.* **1823**, 6, 44–46.
139. May, A.J. *The Age of Metternich, 1814–1848*; Holt Rinehart and Winston: New York, NY, USA, 1963.
140. André, C.C. Rudolf André starb zu Lischuwiz in Mähren den 9 Januar 1825. 32 Jahre alt. *Hesperus* **1826**, 42, 165–168.
141. Cséby, G. The Place of Count Festetics György in the Hungarian Cultural History, with Special Regard to the Hungarian Minerva Series and the Helikon Celebrations. Ph.D. Thesis, University of Szeged, Szeged, Hungary, 2013.
142. André, C.C. Preis von hundert dukaten. *Hesperus* **1823**, 36, 141–144.
143. Sekerák, J. Mendel's discovery in the context of Moravian and world science. In *Treasures of Moravia: Story of a Historical Land*; Galuška, L., Mitáček, J., Novotná, L., Eds.; Moravian Museum: Brno, Czech Republic, 2010; pp. 199–204.

Supplementary File 1

AT-OeStA/HHStA LA ÖA Austrian Parliament 1848, Catholic Church and Clergy, box 90, r. 22-3 (318)

HIGH IMPERIAL ASSEMBLY!

In the political reorganization of our fatherland, the undersigned consider it their duty in the name of humanity, to draw the attention of the High Austrian Parliament to the fact that a whole, and not insignificant, class of people in the Austrian states has been completely excluded from the achievements made in March and May and can only mournfully join the nations' joy of freedom.

According to the Austrian Civil Code, a criminal, whose civil right is merely suspended, is supported by the religious as a civilly lawless one; he is deprived of the Austrian citizenship right and is declared to be civilly dead according to the legal text. Any civil contract he enters into is void same as it is for a fool, a minor or someone placed under curatelle; he may not be a guarantor or witness in court: He is not entitled to be a witness either an assistant at a marriage alliance, nor assume a godparenthood at baptism or confirmation; he may neither inherit nor leave his small, often laboriously acquired property to his relatives who are usually poor; only the Order has the right to inherit from him and on his behalf.

These are the previous civil statutes of the absolute monarchy in favor of the clerical corporations, but to the significant disadvantage of the individual religious, who are, unfortunately, led to understand the content and practical significance of the statutes only after years of sad experience. These statutes have been in full force since the 13th of March and, to date, they have neither been suspended, nor have religious been granted the right of constitutional citizenship. The monastery is regarded as a free association in France, where a citizen is not allowed to be absorbed by the monk; his free civil right is recognized and protected by the state as inviolable and superior to the private contract of the religious association at all times.

If one continues to research the ecclesiastical and social significance of the Austrian monasteries in the 19th century, one will have to admit, as an impartial observer, that these asylums and institutes of Christian love are nothing more than compulsory moral seminaries; they have degenerated into mere institutions for the care of poor and deluded youths! Furthermore, one must admit that the forcible isolation from the people, the withdrawal from the family circle, the immersion in oneself, an inadequate and one-sided education, the glaring difference in form in dress, posture and gesture, as well as the absolute obedience reveal the complete death of the bourgeoisie in the monastic habitat and represent the state of the deepest humiliation.

Since the entire religious clergy has been deprived of the free citizenship right, since it is regarded merely as a blind hierarchy tool, and since the State has given its consent to it through its civil law, it soon had to appear to the intelligent part of the people as a dead member of society, worthless and insignificant, and so even today the monks are regarded as lawless zeros, without any will of their own, expelled from the Great Book of Honor of the free and dignified citizen! Therefore, they were excluded from any elections to the state and imperial parliaments,



as well as to the German parliament; they were denied the active and passive right to vote in all committees, the right granted even to impecunious workers.

But may the great constitutional Austria, the free bourgeois state rising over the peoples of Europe, still have unfree slaves exposed to contempt, free and educated people of the world would point with derision and scorn to? It would be a pillar of shame for Austria, in the colossal and architectural construction of its constitution, to sanction these dungeons of the bourgeoisie, these graves of constitutional freedom. Certainly, the mighty sounding trumpet of the first Austrian Parliament will soon call forth the buried alive cell-dweller to resurrection and civic activity.

Against this backdrop, the professors and pastors, such as the priests of the Augustinian monastery of St. Thomas in Old Brno, take the liberty of expressing a just request to the High Imperial Assembly for the recognition of the constitutional right of citizenship, requesting the permission to devote their entire spiritual strength to the public magisterium, to the free, united and undivided citizenship, according to the measure of their ability and the merits they have acquired so far. The promotion of science and humanity in accordance with the spirit of constitutional progress is, with the sense of honor, the work of their life.

Brno the 8th of August 1848

Fr. Mattheus Klácel
Former professor in philosophy

Dr. Philipp Gabriel
Professor in mathematics in Brno; Head of the Thuringian Institute.

Joseg Lindenthal
Cooperator at the parish in Albtbro.

Benedict Fogler,
Professor in French language and literature & Certified teacher of Italian language

Gregor Mendel
Cooperator and prospective teacher.

I.Chrysostomus Cygánek,
Prospective teacher

AT-OeStA/HHStA LA ÖA Österreichischer Reichstag 1848, Katholische Kirche und Geistlichkeit, Karton 90, r. 22-3 (318)

HOHE REICHSVERSAMMLUNG!

Bei der politischen Umgestaltung unseres Vaterlandes halten es die Gefertigten für ihre Pflicht im Namen der Humanität den Hohen Österreichischen Reichstag aufmerksam zu machen, daß eine ganze, nicht unbedeutende, Klasse von Menschen in den österreichischen Staaten von den Errungenschaften des März und Mai ganz ausgeschlossen, in den Freiheitsjubiläum der sich beglück fühlenden Völker nur wehmüthig einstimmen kann.

Nach dem österreichischen bürgerlichen Gesetzbuche steht hinter dem Verbrecher, dessen Bürgerrecht bloß suspendirt ist, der Ordensgeistliche als bürgerlich rechtsloses Wesen; ihm ist das Österreichische Staatsbürgerrecht entzogen, er ist nach dem juridischen Texte als bürgerlich todt erklärt. Gleich dem Narren, dem Kinde und dem unter Curatel Gestellten ist jeder bürgerliche Vertrag, den er eingeht, ungiltig; er darf weder eine Bürg oder Zeugenschaft vor Gericht: abgeben, weder Zeuge oder Beistand bei einem Eheverbündniße sein, noch eine Pathenstelle bei der Taufe oder Firmung übernehmen; er darf weder erben. noch sein geringes oft mühsam erworbenes Gut seinen gewöhnlich dürftigen Anverwandten hinterlassen; für ihn und von ihm einzig und allein erbt rechtsgültig nur der Orden.

So lauten die bisherigen bürgerlichen Satzungen der absoluten Monarchie zu Gunsten der geistlichen Korporationen, zum entschiedenen Nachtheile aber des einzelnen Ordensmannes, zu deren inhaltschwerer und praktischen Bedeutung er leider erst nach Jahren durch traurige Erfahrungen geführt wird. Diese Gesetze sind seit dem 13 März noch in voller Wirksamkeit, sie sind weder suspendirt, noch dem Ordensgeistlichen bis zum heutigen Tage des Recht der constitutionellen Staatsbürgerschaft zuerkannt worden. In Frankreich wird das Kloster als freie Association betrachtet, in welcher der Staatsbürger in dem Mönche nicht aufgehen darf, sein freies bürgerliches Recht wird als unantastbar und erhaben über den Privatkontrakt des Ordensverbandes vom Staate jederzeit anerkannt und geschützt.

Forscht man weiter über die kirchliche und sociale Bedeutung der österreichischen Klöster im 19. Jahrhunderte, so wird man als vorurtheilsfreier Beobachter eingestehen müssen, daß diese Asyle und Institute der christlichen Liebe nichts weiter, als moralische Zwangseminarien sind; sie sind herabgesunken lediglich zu Versorgungsanstalten armer und verblendeter Jünglinge! Man wird ferner gestehen müssen, daß die gewaltsame Isolirung vom Volke, das Austreten aus dem Familienkreise, das Versunkensein in sich selbst, eine mangelhafte und einseitige Erziehung, der grelle Formunterschied in Kleidung, Haltung und Geberde, der absolute Gehorsam den vollendeten Todschatz des Bürgerthums im Mönchsthume offenbaren und den Zustand der tiefsten Erniedrigung darstellen.

Da der gesamten Ordensgeistlichkeit das Recht des freien Bürgerthums geraubt ist, da sie bloß als blindes Werkzeug der Hierarchie gilt, und der Staat hiezu durch sein Civilgesetz die Einwilligung gegeben, so mußte dieselbe bald dem intelligenten Theil des Volkes als todes Glied der Gesellschaft werth und bedeutungslos erscheinen, und so gelten noch heute die Mönche als rechtslose Nullen, ohne Eigenwillen, ausgestoßen aus dem großen Ehrenbuche des freien und würdigen Bürgerthums! Daher wurden sie von allen Wahlen zum Land und Reichstage, so wie zum deutschen Parlamente ausgeschlossen, die active und passive Wahlfähigkeit zu allen Ausschäiken wurde ihnen verweigert, welche selbst dem unbemittelten Arbeiter zuerkannt wurde.



Dürfen aber in dem großen constitutionellen Österreich in dem freien, vor den Völkern Europas sich erhebenden Bürgerstaate, unfreie der Verachtung preisgegebene Sklaven übrig bleiben, auf welche die freien und gebildeten Völker der Welt mit Spott und Hohn hinweisen würden? Es wäre eine Schandsäule für Österreich, bei dem collossalen und architectonischen Bau seiner Verfassung, diese Kerker des Bürgerthums diese Gräber der constitutionellen Freiheit zu sanctioniren. Gewiß es wird demnächst den lebendig begrabenen Zellenbewohner zur Auferstehung und bürgerlichen Werkthätigkeit durch die mächtig tönende Posaune des ersten österreichischen Reichstages hervorrufen.

In folge dieser Ansicht erlauben sich die gefertigten Professoren und Seelsorger, als Ordenspriester des Augustiner Stiftes ST. Thomas in Alt-Brünn, der hohen Reichsversammlung die gerechte Bitte um Zuerkennung des constitutionellen Staatsbürgerrechtes auszusprechen, mit dem Gesuche, daß es ihnen gestattet sein möge, ihre gesamte geistige Kraft nach dem Maße ihrer Befähigung und dem bis jetzt erworbenen Verdienste, ganz dem öffentlichen Lehramte, ganz dem freien, einigen und ungetheilten Bürgerthume zu widmen. Die Förderung der Wissenschaft und Humanität, entsprechend dem Geiste des constitutionellen Fortschrittes, setzen sie sich mit ehrenfester Gesinnung zu ihrer Lebensaufgabe.

Brünn am 8. August 1848

Fr. Mattheus Klácel
Gewesener Professor der Philosophie

Dr. Philipp Gabriel
Professor der Mathematik in Brünn; Vorsteher des gräfl. Thurnischen Institutes.

Joseg Lindenthal
Kooperator an der Pfarre in Albtbrünn.

Benedict Fogler,
Professor der franzö: Sprache u. Litteratur u. geprüfter Lehrer der italienische Sprache

Gregor Mendel
Kooperator u. Lehramts-Candidat.

I.Chrysostomus Cygánek,
Lehramtskandidat



Supplementary File 2

English Translation

André, Christian Carl. 1823. Preis von hundert dukaten. *Hesperus* 36: 141–144.

Number 36

HESPERUS

Tuesday, February 11th, 1823

Price: 100 Ducats

(compare: Issue #21)

This is entirely, or in part, written for those, who in the guaranty of the rights of the citizens of the State, and the freedom of the press, deliver the best, the most convincing, the most undeniable facts of today and for the next two years into the hands of the undersigned. I render honor to the Dukes and their thrones. I detest counter arguments and revolutions. But I also value the citizens of the State as an important and integral part of the State. This is a long misunderstood, and only recently recognized truth, in which a party, which only recognizes masters and servants and which is hesitant to relinquish its absolute supremacy, is not quite willing to admit to, or only to a very limited extend, to this truth. Here I present three decisive challenges. They should be easy to answer and to proof, and could therefore be quickly dealt with, but only without sacrificing their inner strong, justifiable and decisive power. (Because this is the general challenge of this undertaking). And this, because too many facts have already been accepted, so that it depends now only on their skillful compilation to be an incisive contrast to the opposition, according to the teachings of history.

This immediately leads to a second challenge which I present to the worker. Teaching through facts is the best way to get proof, which is what is to be desired, but not without exclusion of other means. This, however, is of little import and can be dealt with quickly, since excessive preparations have already been done, and mostly because the conclusions of others, with attribution to their writings, need to be used.

The third follows the above: to relegate theory -especially the sublime or the mystic - into the background, and instead emphasize the practical - in parallels, contrasts, inversions (what a quite different story, when...!) cause and effect, and all this presented quite effectively to appeal to common sense and unspoiled emotions.

There follows four: a lively, flowery, forceful presentation, while avoiding unnecessary details and length. These challenges are directed less towards the preliminaries, but more towards the main concerns.

Each citizen is an integral part of the State (assuming that he shows unmistakable proof). There follows the question: what is the most important thing for him? Here - it should be noted - I am speaking of the citizen only, not dukes, nobles, soldiers and employees of the State. Plenty of resources exist for those. They not only have rights, but also privileges and guaranties aplenty,



because of birth, inheritance, and they think with prejudice and entitlement to wield the power of wealth, of intelligence, to make laws, to dole out charity, and to hand out grace-and honorific decorations, even to influence religion. Who, however, guaranties the rights of the citizen, even the poorest inhabitant of a hut? What do these rights consist of - have to consist of, in order to keep the concepts of States and Citizen from being mere chimaera?

But how can these rights be best secured? This is the axis around which turns the most important part of the political doings of the last generation, and it will continue to turn until a sufficiently tranquilizing answer will be followed by some concrete deeds. This will never happen until everybody who can hear, see, think and hope for happiness, calm and peace for himself and his family will be free of the effects of misuse of power, persecution of citizens, and the misdeeds of those who proceed unpunished and without regard for the laws.

Therefore, this is now a prime challenge -to treat this problem by answering the negative opposition with arguments that will be obvious, and will need only a skillful composition. Such as: I want, as much as possible, a complete compilation of all already known, but even more so, all less known or unknown facts concerning abuse, extortion or maltreatment. This is the actual nucleus of the theme, which offers the most free and personal work methods, so that everyone can report from his point of view, from where he can best survey the happenings or best obtain the facts. The facts could be listed under the heading -for example: Dept. of Justice - and the examples could be listed by time and location like a notice board, showing the sad effects of abuse and, where applicable, the release of the citizen. Also, Institutions can be tied in, for example the Inquisition, secret police, etc. This is fertile ground for our point of view in the persecution history of certain States and at the same time the historical proof of the true source of the revolutions, which in our times are often attributed to the bad influence of conspirators who hate the Dukes and wish to drive them from their thrones to take the seat themselves. History here speaks louder, more explicit and indisputably shows proof, that all who are traitors, pretenders and fanatics, who took advantage of the innocent trust of more than one duke, by having him assent to dubious legislation which only made the inequities worse. This evil should most certainly not be ignored, but it is not in a position where it could be changed. It did not start on its own, it is a necessary effect of gross committed mistakes which are closely related to our main theme; therefore, consideration is recommended. It has to be shown historically, that revolutions are as old as the world and even God can't change that, and that in medieval days and in newer history, they have basically all one great, powerful and important source, which is known, and has been described frequently. However, to my knowledge, never in such a stringent connection and overview has the result of their extraordinary, far spread and poisonous influence and simple explanation shown why, where it was prevented, generally reigned peace and quiet. I want to say in general, since certain explosions of passion even God can't prevent.

But in recent times, there exist a quite different, common source, which according to its nature is born to entice to revolutions, unless they are tamed by wise governments. But the fact that, without exception, the nations in all of Europe have been helpless against the influence and damage of this trend, is the undeniable proof against the fanatic, shortsighted and faithless servants of the State, which frighten their Dukes with revolutions, the embers of which they know how to find and know how to fan into firebrands like firework.

In this way, one can paint a marvelous painting of the most different topics with the, herewith given, leading idea. The most convincing connection in a chain of the most complete facts possible, are the links that answer the main question of the Induction: just as during the times



of the Trojan War, the rights of the Citizens are being destroyed, which can no longer be tolerated by a wise and just government (such as I see everywhere in Europe starting at the North Cap and ending in Turkey). This would be the desired masterwork!

The known facts have to be drawn in large, powerful strokes, more a reminder than a document, and it should be mainly a completion and underlining of the whole. The lesser known, by virtue of being that, should be emphasized. The entirely unknown facts (of which there are plenty hidden in secret Cabinet-, Justice-, and Police Archives and in manuscripts of private persons) should be made public, in order to illuminate the dark dealings of these persons, and in that way serve a great healing purpose. Everyone, who feels so moved and has the opportunity to find out about persecution and abuse, should do so.

Everyone should tell what he knows, is certain of, especially if historical proof exists, (only the truth, far from any illusion, hypothesis, ill intent or exaggeration - this is and will always be the ground rule) and he should tell as much or as little, and from his very own point of view. So for instance, in the memoirs of Darius, by citing Venetian facts, one can find a treasure trove for answering the question. Would this State have perished without the abuses of its powers? However, the documents from the German History of the States would be of very special interest, as much for their successes (Hail the upstanding, faithful German national character, which is so often scorned - it suffers, but doesn't start a revolution) and for their failures, as much as their numerous debts.

How much Schloezer collected! And besides, how rich is also Lese! One should count this all up and ask our present, insightful, wise and virtuous Dukes, who live only for the happiness of their people, if they ever saw such mistress dealings, such father confessor intrigues, such heaven- crying misdeeds of the court favorites, such justice murders, such misuse of power by corrupt ministers and such waste of the sweat of the subjects. If they should be filled with disgust and anger against everybody who commits similar misdeeds in their name, or who, with elephantine power destroys the innocent and powerless citizen. But it happened often that way, when the masses were acquiescent, then one person can misuse trust to gain wealth and protection for the security of his own future. But which are the guaranties? Which is the best, surest, most useful, and in themselves most necessary guaranties, so that State and Citizen of the State do not remain empty words? A Constitution, representative Unions, the sense of duty of the Ministers, basic laws, public access to Debates of the State, freedom of the Press and freedom to vote for their Representatives. They are spoken of often and for the better part of thirty years. were discussed as impetus for a new vitality of the State. A reasonable and non-political person will find it hard to doubt the influence of these ideas, especially when time and experience have made them more mature and expanded. So many excellent writings -pro and con - have been published in German, French and English papers, that the matter can be considered exhaustively known, and it would be easy for the rivals to present the results as victorious with an attribution to the sources.

But an important question is: when (like in the Eastern States) a third, a so-to-speak middle class is missing, when capable elements of a suitable representation (any other would only be a theatrical show, or even yet another abuse), are missing, or where the government has reason or dislike to change anything in the Constitution, can one then with the help of other measures at least in part establish the missing guaranties? Freedom of the Press for example would be a valuable tool to cut through the horribly twisted knots of normal business dealings in the fastest and most inexpensive way. But especially because of that, they abhor those who are the most skillful and deceptive in untying the threads of the knot. Secrecy and darkness are their element,



to tie knots, to turn loops, to produce fog and smoke, and spread it everywhere in order to catch as many as possible. That is their favorite game, and unlimited control their end goal - something they will never achieve as long as the Press is there to inform the people. Therefore, their hate of the Press in general, especially absolute and unyielding hate against their freedom. - If the Press is feared with such panic, then one could also consider various other charitable institutions, such as judges, settlement commissions, fiscal offices, and such, which should protect against abuse of authority and official abuse against the knowledge and will of a fatherly regent. They will sanction the misdeeds and be an anchor that the maltreated citizen of the state can use rightfully and without fear until he gets his rights. I am citing the example of the Austrian fiscal-and county constitution with its laws which the immortal Emperor Joseph II introduced. Possibly nowhere in a non-constitutional state has the farmer such laws and guaranties against undue pressure and unlawfulness during times of peace. During times of war, the power of the military outranks the laws of the citizen. This often also leads to great injustice, hardship and self-enriching coercion by the civil authorities as well. During the last wars, the favorable treatment of certain recruits has earned millions for some officials, while it caused tears and sorrow for those recruits that were sacrificed. However, the general draft and the lottery for certain age groups is already a certain protective guaranty, I.e. In lucky Wuerttemberg.

And this way, similar guaranties of various sorts against still existing abuse can be achieved. "The laws exist to guaranty the rights of everyone, and the last instance is always the Duke of the State himself. " But which and how many, dark, two-faced and contradictory laws! And who, other than the initiated, knows them? Even in the courts, where one would think them to be well informed, verdicts cannot always be understood. Even more so in the far reaching, tottering area of governmental politics, far removed from the judicial circles, where the rules can possibly do more damage than the insufficient, arbitrary legislature, where the observation of the rules is often considered as being the observation of the laws! Here it is considered a masterpiece of lawman ship that those, who have been accused of some wrongdoing have to present *rationes decidendi*, so that no indictment is made. And then the expenses, the extraordinary loss of time, the missing trust - how can the accused be my judge? And the difficulty, even in larger States, to reach the Monarch! And the even greater one, that He can wade through these many things and understand them. So, back to the reporting.

Here now, the facts have to show that this will serve to inform, but it is not enough for decision making, and that it often nothing more than the sanctioning of an injustice through new rules of a higher authority. I have heard of a remarkable case through a court proceeding, where a citizen in good standing, but through great injustice lost a considerable fortune of 30.000 Florins. He had great luck, however, that he reached the ear of the Monarch and even greater luck in that he found the sympathy of the Monarch, and the greatest luck in that the Monarch gave his case to an honest judge for a review. The judge confirmed the good standing and the injustice done to the man and declared the systematic venality of all instances. The Monarch then sends the case once more to the Court for another revision. The judgement is the same as from the first trial. The Monarch complains and the judge's answer was: " It couldn't be any other way. It is the lesser misfortune that a single person loses, then that the court system goes down." And what does the noble Duke? Through a third person he reimburses the citizen for the court expenses and 30,000fl from his own money.

This is a true case and it speaks for many. The result is favorable, but ambiguous. Even with the involvement of a monarch, who has the wellbeing of the citizen at heart, how much happenstance and luck is involved to achieve one's right. Here then is the point, where the



Dukes themselves need the guaranty that their own actions will not be quickly overruled, that they and the citizens will not be methodically deceived, while both are subject to chance and luck.

One important consideration is the enormous waste of time, this true, exquisite torture. In the matter of rest, security, honor, possessions and freedom, each sleepless night of doubts is the shortening of life and often a greater torture than the true knowledge of misfortune. We have become much more humane in the corporal treatment of political sinners and criminals, sometimes even more so than necessary; but those other, greater afflictions of the soul don't seem to have been given their due treatment, because otherwise one would seriously find greater perfection, and especially greater speed and abbreviation of many procedures in our political institutions.

I think I have said enough to point out the purpose and spirit of the work that I would like to see done. It's importance and great interest are self-evident. I don't have a State of my own, I have the peace of all States, the happiness of the citizens at heart. That, which is a necessity for all, should be evident through pertinent fact about the individual. So much so that those who, through chance or luck, have been made advisers to the monarch, would blush or blanch were they to attempt sophism, smoke screens or any other means to avert the truth. If I achieve that, then I think that I have started something of magnitude. And those, who do this work with noble ambition, what infinite success they will gain! But how small is the income I can offer them. And this moves me, along with all the known and unknown friends of a good thing and who are of the same mind, to consider the proposed price negotiations as equally important and income-wise of great practical importance and foremost interest of the citizens. To show it as a means to assure calm in the State by making smaller or larger contributions to strengthen the price amount. Quite often, I was lucky, with the help of a multitude of smaller means, to muster a considerable leverage for less important purposes. Maybe I will once again be successful with this enterprise, the purpose and consequences of which I consider the most important. Every pecuniary contribution, as much as any intellectual one towards the solution of the problem, will be truly recorded in these papers, even those that only bring unknown, interesting facts, but that underline the main theme. Several fragments were contributed by friends from Spain, Naples and by me with the heading " True Causes - Then and Now" They will be used for the main publication, of which, after successful price negotiations, I shall maintain ownership.

I ask of all publishers of political or educational papers, as well as of all other periodicals, to do me the favor of making this priced work available to all its readers as quickly as possible, or, where space does not allow, to notify the readers of the availability of this article.

Stuttgart, February 7, 1823.

C.C. André

Royal Counsellor of the Duke of Wuerttemberg